

ABSTRACT OF THE DISCLOSURE

A manual override mechanism is presented for a motor-driven linear actuator that allows the output rack and pinion of the actuator to be manually positioned. Once positioned, the output may be locked by a locking mechanism to prevent this output from translating to its quiescent position. When incorporated in a spring-return linear actuator, the manual override may be used to apply a preload on the spring before the driven device is connected. When the actuator is used to drive a valve or damper, the preload applies a positive closing force on the valve or damper in its zero position to ensure a tight closure of the valve or damper. The locking mechanism engages the gear train and opposes the closing force applied by the spring return of the actuator. To disengage the locking mechanism automatically, the motor applies a forward kick to the gear train. Manual disengagement is also provided.